

Application No.: Not Yet Assigned

Docket No.: 05587-00371-US

AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for producing pelletized materials comprising high- molecular-weight (“HMW”) polyethylene and/or ultrahigh-molecular-weight (“UHMW”) polyethylene and fillers and/or reinforcing materials with the aid of an extruder, the sections of whose screw are a feed section, a transition section, and a metering section, encompassing the steps of:
- a) introduction of pulverulent to small-particle HMW and/or UHMW polyethylene and of fillers and/or reinforcing materials into the feed section, which is a double-flighted screw section formed from a conveying region whose length is from 2 to 16 times the screw diameter, and a decompression region whose length is from 5 to 8 times the screw diameter, the screw here having a flight depth of from 4 to 10 mm in the region of the feed section,
 - b) transport of the HMW and/or UHMW polyethylene and of the filler and/or reinforcing material through the feed section with the aid of the screw,
 - c) transport of the HMW and/or UHMW polyethylene and of the filler and/or reinforcing material with the aid of the screw into the transition section, which is composed of a shear region whose length is from 1 to 6 times the screw diameter, and
 - d) transport of the HMW and/or UHMW polyethylene and of the filler and/or reinforcing material with the aid of the screw into the metering section, which encompasses a mixing region whose length is from 1 to 4 times the screw diameter,
 - e) transport of the HMW and/or UHMW polyethylene and of the filler and/or reinforcing material with the aid of the screw through a die of predetermined geometry, forming at least one extrudate strand, and
 - f) comminuting the at least one extrudate strand in a manner known per se,

which comprises using a screw whose design, at least in the transition section, is that of a barrier screw.

2. (Currently amended) The process as claimed in claim 1, wherein the polyethylene is an ultrahigh-molecular-weight polyethylene.
3. (Currently amended) The process as claimed in claim 1, wherein the amounts present of the fillers and/or reinforcing materials are present in an amount up to 60% by weight, ~~preferably from 0.1 to 40% by weight~~, based on the pelletized material.
4. (Original) The process as claimed in claim 3, wherein the fillers and/or reinforcing materials are selected from the group consisting of dyes, organic or inorganic pigments, antistats, reinforcing agents, mineral fillers, and synthetic fillers.
5. (Currently amended) The process as claimed in claim 4, wherein the fillers and/or reinforcing materials are selected from the group consisting of carbon black, graphite, metal powder, ~~in particular aluminum powder~~, mineral powder, ~~in particular wollastonite~~, reinforcing fibers, ~~in particular glass fibers, carbon fibers, or metal fibers, including whiskers~~, and glass beads.
6. (New) The process as claimed in claim 1, wherein the amounts present of the fillers and/or reinforcing materials are present in an amount from 0.1 to 40% by weight based on the pelletized material.
7. (New) The process as claimed in claim 6, wherein the fillers and/or reinforcing materials are selected from the group consisting of dyes, organic or inorganic pigments, antistats, reinforcing agents, mineral fillers, and synthetic fillers.

8. (New) The process as claimed in claim 7, wherein the fillers and/or reinforcing materials are selected from the group consisting of carbon black, graphite, aluminum powder, wollastonite, glass fibers, carbon fibers, metal fibers,-and glass beads.